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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/276,021	03/25/1999	KHALID YOUSSEFF	024/1	1550

7590 02/26/2003  
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EXAMINER

HAROLD, JEFFEREY F

ART UNIT PAPER NUMBER

2644

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/276,021

Applicant(s)

YOUSSEFF, KHALID

Examiner

Jefferey F. Harold

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 7 is/are rejected.
- 7) ☒ Claim(s) 4 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-3, 5 and 7** are rejected under 35 U.S.C. 102(b) as being anticipated by Boyer (United States Patent 4,554,417).

Regarding **claims 1 and 5**, Boyer discloses a tandem adaptive echo canceller arrangement. In addition, Boyer discloses an arrangement (figure 1) for canceling echo canceling echoes supplied via the received signal (X(k)) and supplied to the received input (X), which reads on claimed "apparatus", as disclosed at column 2, lines 40-46 and exhibited in figure 1, comprising:

control unit (16), which reads on claimed "means for implementing", at the start of a communications session over input line (X) which reads on claimed "communication line", echo cancellers 10 and 12, which reads on claimed "plurality of echo cancellers", for canceling echo on input line (X), the echo cancellers each operate to cancel echoes that arrive during non overlapping 16 millisecond intervals, as disclosed at column 2, line 64 through column 3, line 12;

each of the adaptive filters (10 and 12) include an adaptive transversal filter, which reads on claimed "means for training", each canceller produces a signal estimate, which reads on claimed "cancellation signal", that cancels arriving during the 16 millisecond window associated with each of the echo cancellers, as disclosed at column 2, lines 46-63;

switch (16), which reads on claimed "means for eliminating", after a predetermined training period, the echo canceller (10 or 12), that produces a cancellation signal below a predetermined threshold, as disclosed at column 3, line 38 through column 4, line 21.

Regarding **claims 2-3 and 7**, Boyer discloses everything claimed as applied above (see claim 1), in addition claims 2-3 are interpreted and thus rejected for the reasons set forth above in the rejection of claim 1.

***Allowable Subject Matter***

3. ***Claims 4 and 6*** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claim 4**, the prior art of record failed to specifically disclose or fairly suggest allowing a user to alter the predetermined threshold via a graphical user interface.

Regarding **claim 6**, the prior art of record failed to specifically disclose or fairly suggest allowing a user to alter the predetermined threshold.

***Response to Arguments***

4. Applicant's arguments filed on July 22, 2002 have been fully considered but they are not persuasive.

Regarding applicant argument concerning elimination of echo cancellers, the examiner respectfully disagree, since the above recited rejection more than adequately meet the claimed limitation. In addition, the echo canceller of Boyer adjusts its "time

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bandwidth" based on the signal, thus changing from one "time bandwidth" to another reads on canceling the echo canceller for the previous "time bandwidth".

### ***Citation of Pertinent Art***

5. Duttweiler, (United States Patent 5,566,167), sub-band echo canceller.

Muraoka, (United States Patent 6,185,301), echo canceller having plurality of adaptive filter circuits.

Shaw, (United States Patent 5,610,909), multistage echo canceller including time varying compensation.

Margo et al. "Multiple Short-Length Adaptive Filters For Time-Varying Echo Cancellation", 1993 IEEE International Conference on Acoustics, Speech, and Signal Processing, April 27-30, 1993, pages I-161 - I-164

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jefferey F. Harold whose telephone number is (703) 306-5836. The examiner can normally be reached on Monday-Friday 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



JFH  
February 24, 2003



FORESTER W. ISEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600